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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/19/2001

Maxim B. Belotserkovsky

RCA 90334

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7590

01/24/2005

JOSEPH S. TRIPOLI
THOMSON MULTIMEDIA LICENSING INC.
2 INDEPENDENCE WAY
P.O. BOX 5312
PRINCETON, NJ 08543-5312

EXAMINER

MEEK, JACOB M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,651

Applicant(s)

BELOTSEKOVSKY ET AL.

Examiner

Jacob Meek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 3 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to Claims 3 & 15, claims state “enabling,... initialization of second tap; wherein step of enabling the initialization ... is contemporaneous with ...”. Specification appears to indicate that taps are initialized simultaneously (page 7, lines 4 – 8), and not following adaptation of 1st tap. Also specification doesn't appear to differentiate between individual tap settings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 - 5, and 13 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rademacher (US Patent 6,570,918).

With regard to Claim 1, Rademacher teaches a method of initializing an equalizer in a wireless receiver (see column 1, lines 8 – 11) comprising inhibiting an initialization of the 1st tap (see column 12, lines 10 – 32, where several methods are described) during a time

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window. Rademacher is silent with respect to OFDM but does state that his invention is useful for other modulation schemes (see column 13, lines 53 – 55). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Rademacher's device to provide an equalizer which could a lower noise adaptation process (see column 13, lines 23 – 35) for use in an OFDM system as this is a well known modulation technique.

With regard to claim 2, Rademacher teaches the enabling of adaptation of 1st tap (see column 10, line 66 – column 11, line 15 where this is interpreted as enabling update of 1st tap).

With regard to claim 3, Rademacher teaches a method of enabling initialization of a second tap (see Column 9, lines 43 – 53 where this is interpreted as equivalent) where the step of initialization of the 2nd tap is simultaneous with enabling the adaptation if the 1st tap (see column 9, line 53 – 55 where the initialization of taps result in an input to adaptation unit).

With regard to claim 4, Rademacher teaches a method by which taps are initialized base on a training sequence (see column 9, lines 43 – 48 where this predetermined sequence is interpreted as a training sequence).

With regard to claim 5, Rademacher teaches a method of adaptation of 1st tap based on data portion of 1st signal (see column 10, lines 43 – 55 where this is interpreted as equivalent).

With regard to claims 13 – 17, the components claimed as apparatus are nothing more than a restating of the embodiment of the method as claimed above and therefore, it would have been obvious, given the aforementioned rejection for the method claims 1 – 5.

3. Claim 9 - 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollman et al (US Patent 6,597,733).

With regard to Claim 9, Pollman teaches a method of initializing an equalizer in a wireless receiver (see column 1, lines 8 – 11) comprising initialization of a plurality of taps upon startup (see column 7, lines 4 – 8, where this is interpreted as equivalent), re-initializing the plurality of taps during a time window (see column 7, lines 17-21 where this is interpreted as equivalent), and selectively reinitializing taps based upon a divergence of the tap (see column 7, lines 24 – 30 where this is interpreted as equivalent). Pollman is silent with respect to OFDM but does state that his invention is useful for other modulation schemes (see column 1, lines 53 – 55). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Pollman's device to provide an equalizer with improved performance (see column 1, lines 28 – 46) for use in an OFDM system as this is a well-known modulation technique.

With regard to claim 10, Pollman teaches a method of initializing an equalizer in a wireless receiver (see column 1, lines 8 – 11) comprising initialization of a plurality of taps based on a training portion of a startup signal(see column 7, lines 11 – 13, where this is interpreted as equivalent), re-initializing the plurality of taps during a time window based on the training portion of a subsequent signal (see column 7, lines 26 -29 where this is interpreted as equivalent), and selectively reinitializing taps based upon a divergence of the tap (see column 12, lines 22 – 26 where this is interpreted as equivalent). Pollman is silent with respect to OFDM but does state that his invention is useful for other modulation schemes (see column 1, lines 53 – 55). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize Pollman's device to provide an equalizer with improved performance (see column 1, lines 28 – 46) for use in an OFDM system as this is a well-known modulation technique.

With regard to claim 11, Pollman teaches his technique is used for WLAN (see column 1, lines 9 – 11 where this is interpreted as inclusive of WLAN applications).

With regard to claim 12, Pollman teaches a method usable for computer communications (see column 1, lines 13 – 20 and 46 – 53).

Allowable Subject Matter

4. Claims 6- 8, 18 – 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Cited Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kanada et al (US Patent 6,307,883, Pessoa (US Patent 6,535,552), Redferm (US Pub 2002/0163983), and Birru (US Pub 2003/0007554) all teaches variation of adaptive equalization techniques suitable for use in wireless data applications.

Contact Information

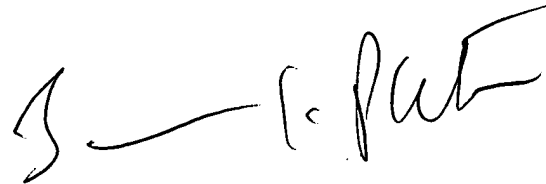
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM



JAYANTI PATEL
SUPERVISORY PATENT EXAMINER